ARGUMENTS/REMARKS

Applicants would like to thank the examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action, and amended as necessary to more clearly and particularly describe and claim the subject matter which applicants regard as the invention.

In the specification, various paragraphs have been amended to correct minor editorial and/or clerical errors introduced in a translation of the original filed application. The amendments rely on the originally filed application and thus do not include any new matter.

Claims 1-19 have been canceled. New claims 20-51 have been added based on features disclosed in the specification and/or the original claims. The claims have been amended for clarification purposes, and not for patentability reasons.

The Examiner objected to figures 1a, 1b, and 2-6 for being inconsistent with the specification. The specification has been amended to make it consistent with the formal drawings provided with this amendment.

The Examiner objected to the specification for various reasons. The amendments to the specification provided with this response correct the identified problems.

The examiner objected to claims 3-8, and 11-18 because multiple dependent claims should depend on other claims in the alternative only. The applicant's representative disputes that the claims originally filed were improper. For example, claim 3 recited the "method as claimed in *either* of claims 1 and 2..." (emphasis added). This is proper alternative language and is clear that one or the other claim is chosen, and is not one of the prohibited forms given in MPEP §608.01(n). Similarly, claim 4 recites "as claimed in *one of* claims 1 through 3" (emphasis added). Again, this is proper alternative language, being clear that only *one* of the claims is chosen, and is consistent with the examples given in MPEP §608.01(n). The other claims use similar language. Not only is this language proper, but it is commonly used in U.S. patents for multiple dependant claims (see, for example, . Hence, the Examiner

should have treated those claims on the merits.

Claims 1, 6, 9, and 19 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite. These claims have been canceled, making the rejection moot. However, applicant's representative disputes that claim 19 is an omnibus claim as the Examiner says. An omnibus claim is one that merely claims the invention as disclosed. Instead, claim 19 specifically refers back to prior claims, and thus is limited by those claims.

Claims 1, 2, 9 and 10 were rejected under 35 U.S.C. §102(b) as being anticipated by Cezanne *et al.* (U.S. 5,473,701). For the following reasons, the rejection is respectfully traversed.

Applicant's representative asserts that Cezanne does not teach the invention as recited in the canceled claims. However, the rejection is moot because the claims were canceled.

New claim 20 recites "forming a ratio of said output signals of said first and second microphone sub-arrangements, thereby generating a ratio result". Cezanne does not suggest such a ratio as defined above.

The Examiner points to Fig. 3, col. 5 lines 6-8, and columns 5 and 6, expressions 5, 6, 7, and 8 as teaching the "ratio" as claimed. In support, the Examiner provides the following equation in the Office action that is supposedly from the numerator of expression 6 in col. 6:

$$c_B(n)c_F(n) = [c_B(n)/c_F(n)][\ c_B(n)^2]$$

The right portion of the above equation is not properly a part of the numerator. The ratio $c_B(n)/c_F(n)$, not found in the Cezanne reference, is simply introduced and called "inherent". Taking this to its logical absurdity would lead to such improper results as saying that the number 1 teaches the ratio as well, because we could describe the number 1 by $[c_B(n)/c_F(n)][c_F(n)/c_B(n)]$ because the values of the numerators cancel out the values of the denominator. We could even say, in a similar fashion, that the number 1 teaches equation 6 of Cezanne. These are not *inherent;* they are improper attempts to find something in the reference that is not

there.

Further, it is also mathematically improper to do what the Examiner has done. If $c_F(n)$ can take on the value 0, then $c_B(n)/c_F(n)$ becomes undefined at some point, whereas the product $c_B(n)c_F(n)$, which is what the reference actually teaches, does not. Thus, the Examiner's manipulation of the equation changes the result at a zero value for $c_F(n)$, and is thus clearly not only *not* inherent, it changes the principle of operation.

Further, it is not enough to merely allege that a function or feature is "inherent". The Examiner must provide evidence and or rationale to show inherency. MPEP §2112. The fact that a certain result or characteristic *may* occur or be present in the prior art is *not sufficient* to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art) (emphasis added); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). "To establish inherency, the extrinsic evidence `must make clear that the missing descriptive matter is *necessarily present* in the thing described in the reference, and that it *would be so recognized by persons of ordinary skill*. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.' " *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (emphasis added). "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic <u>necessarily</u> flows from the teachings of the applied prior art." Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). See MPEP §2112

The Examiner has not shown how the ratio added to the equation of Cezanne "necessarily flows" or is "necessarily present" from the disclosure. Hence, the Examiner has also legally failed to support his claim for inherency.

Instead, Cezanne explicitly describes its function in col. 7, lines 14-27, where

it describes a ratio of "the block average of the cross-product of back and front cardioid sensor signals divided by the block average of the square of the back cardioid sensor signal" (lines 14-16). This is clearly not a "ratio of said output signals of said first and second microphone sub-arrangements" as recited in claim 20.

Further, the equation 6, which represents a Wiener filter of length 1 (col. 6, line 9) becomes as follows:

$$\beta = \frac{\left[\frac{1}{(N)}\right] \cdot \left[c_B(0) \cdot c_F(0) + c_B(1) \cdot c_F(1) + c_B(2) \cdot c_F(2) + \ldots + c_B(N-1) \cdot c_F(N-1)\right]}{\left[\frac{1}{(N)}\right] \cdot \left[c_B{}^2(0) + c_B{}^2(1) + c_B{}^2(2) + \ldots + c_B{}^2(N-1)\right]}$$

Where N is suggested as being as large as possible (col. 7, lines 11-12). This is clearly not a ratio of the "said output signals of said first and second microphone sub-arrangements" as recited in claim 20. A ratio is defined as "a proportional relationship between two different numbers or quantities" and "a quotient of two numbers or expressions arrived at by dividing one by the other" (see http://encarta.msn.com/dictionary_/ratio.html). The above equation from Cezanne is more properly described as a "ratio of a sum of the products of two signals divided by a sum of the signals squared over an interval [0,N]", which is generally the description given in col. 7, lines 14-27.

Accordingly, Cezanne does not teach the ratio as claimed in claim 20. New claim 33 recites a similar "ratio" at lines 15-20, new claim 47 at lines 11-12, and new claim 48 at lines 17-22. Thus, these claims are patentable over Cezanne for the same reasons as claim 20. The remaining claims through claim 50, being dependent, directly or indirectly, upon one of claims 20, 33, 47, or 48, are at least patentable over Cezanne for the same reasons as the parent claim.

Further, claims 27 and 51 specifically recited using the equation:

$$S = c_n \cdot \left\{ A - \left[\alpha \cdot \frac{|c_z|}{|c_n|} \right]_{satB} \right\}$$

to generate an output, which is nowhere suggested by the reference, and hence

those claims are patentable over the reference for that reason as well. Claims 52-55, which depend, directly or indirectly, on claim 51, are patentable over the references for at least the same reasons as claim 51.

In consideration of the foregoing analysis, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. 32558.

Respectfully submitted,

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January 26, 2004